U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Flow Chem Fire - Removal Polrep
Initial Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region VI

Subject: **POLREP #1**
Initial
Flow Chem Fire

Rayne, LA
Latitude: 30.2482779 Longitude: -92.1985769

To: Ronnie Crossland, EPA R6

From: Madison Baxter, On-Scene Coordinator
Date: 5/4/2018
Reporting Period: 5/3 - 5/25/18

1. Introduction

1.1 Background

Site Number:	**Contract Number:**
D.O. Number:	**Action Memo Date:**
Response Authority:	**Response Type:**
Response Lead:	**Incident Category:**
NPL Status:	**Operable Unit:**
Mobilization Date:	**Start Date:**
Demob Date:	**Completion Date:**
CERCLIS ID:	**RCRIS ID:**
ERNS No.:	**State Notification:**
FPN#:	**Reimbursable Account #:**

1.1.1 Incident Category

Emergency Response

1.1.2 Site Description

FlowChem Technologies LLC (FlowChem) facility comprises just over 2 acres of land. There are two structures that consist of a plant (blending facility) and a lab/office building in addition to a large outdoor storage yard. The FlowChem facility is a specialty oilfield chemical provider that offers products that include: demulsifies, paraffin inhibitors, paraffin dispersants, defoamers, water clarifiers, scale inhibitors, corrosion inhibitors, biocides, surfactants, acids, oxygen scavengers, hydrogen sulfide scavengers, and other like products.

1.1.2.1 Location

The site is located at 289 Cutlass Loop, Rayne, Acadia Parish, Louisiana and is situated adjacent to Highway I-10, near the Highway 95 junction. The facility is less than 0.25 miles from the nearest residential area, and a large truck stop is also nearby.

1.1.2.2 Description of Threat

On 03 May 2018 at approximately 1600 hrs., the FlowChem plant/blending facility caught fire due to unknown cause(s) at this time. A number of explosions were noted before the larger structure caught fire and enveloped the majority of the facility. The fire suppression water and foam utilized to control the fire mixed with the released chemicals and migrated off-site onto adjacent land and within surrounding drainage ditches and a larger drainage canal; where it was contained through use of earthen dams.

Due to the various chemicals stored on-site, the fire suppression water/foam potentially contain hazardous materials, contaminates, and/or pollutants that pose a threat to human health and the environment.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

On 04 May 2018, EPA OSC Guidry assessed the incident and found the contaminated fire suppression water/foam contained within the drainage ditches and canal. The incident location contained numerous damaged containers (drums and totes) and pools of contaminated fire suppression water/foam. Furthermore, Louisiana Department of Environmental Quality (LDEQ) as well as environmental contractor hired by FlowChem conducted ambient air monitoring within the incident location and nearby residential area and found normal oxygen levels and no volatile organic compounds. No injuries associated with the incident have been reported.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.2 Response Actions to Date

On 04 May 2018, EPA OSC Guidry along with technical contractor arrived on-site, conducted assessment, and met with state and local responder as well as FLowChem representatives for an incident briefing. The following incident information was obtained:

On 03 May 2018, LDEQ, Louisiana State Police (LSP), local fire department, and other local officials responded to the incident. At approximately 1800 hrs., LDEQ began ambient air monitoring, the fire department began to control the fire, and earthen berms were constructed to contain run-off and prevent further migration. At approximately 1900 hrs., LSP placed a 1-mile evacuation zone and a 3-mile shelter-in-place to communities located north of the facility; in addition to an earlier closure of Interstate 10. At approximately 2000 hrs., the fire was extinguished, air monitoring revealed non-detects for targeted emissions, and evacuation and shelter-in-place remained in effect as a precaution. Following control of the fire, LSP made entry into incident location and secured bulk storage tanks by closing valves. At approximately 2200 hrs., four (4) vacuum trucks arrived on-site and began recovering contaminated fire suppression liquid from ditches, which was stored in on-site fractionation tanks.

On 04 May 2018, due to control of fire and lack of detection of targeted noxious emissions within ambient air, Interstate 10 was reopened at approximately 0200 hrs. and evacuated residents (~71) were being allowed to reenter at 0600 hrs. FlowChem contractors continued recovery of contaminated fire suppression liquids that was stored within twelve (12) on-site fractionation tanks; over 7,000 barrels of liquids have been recovered. In addition, FlowChem began flushing the drainage ditches with fresh water to further clean the ditches and push contaminates to recovery locations, as well as commenced removal of contaminated soil that was loaded into on-site roll-off boxes.

On 05 May 2018, FlowChem and its contractors continued clean-up operations. Operations were mainly focused on removal of contamination (contaminated fire suppression water, impacted drainage ditch and canal soil, and impacted surface soil) to prevent further migration contamination by working from downstream/down gradient locations towards upstream/up gradient locations. As the crew moved upstream/up gradient, they installed additional earthen berms within drainage ditches to prevent recontamination of cleaned areas. Operations also included clean-up of incident area and decontamination of firefighting equipment. By 1730 hrs, the clean-up crew conducted the following activities.

- Continued to decontaminate firefighting equipment; should be completed by end of today or tomorrow.
- Commenced removal of undamaged products from incident area (blending facility pad).
- Conducted limited removal of remaining contaminated fire suppression water from incident area cement slab.
- Established earthen berm along north side/down gradient of incident area cement slab. Berm utilized as secondary containment structure to prevent run-off from incident area.
- Pressure washed contaminated area of Cutlass Loop (approximately 385') that runs along the north side of incident area.
- Continued to recover contaminated fire suppression water from drainage ditches and canal. Recovered water held in on-site fractionation tanks. As of 0800 hrs, approximately 8,500 bbls of contaminated water has been recovered.
- Completed removal of contaminated fire suppression water from drainage canal that was followed with a surface scrape of canal (approximately 517') to remove visual contamination. Both the up and down stream berms/dams are being left in place until confirmation soil samples are collected, analyzed, and compared to RECAP standards per direction of LDEQ.
- Completed removal of contaminated fire suppression water from approximately 265' of the most downstream/gradient portion of drainage ditch that was followed with a surface scrape of drainage ditch to remove visual contamination. An additional earthen berm/dam was installed upstream of scraped area to prevent recontamination.
- Scraped and removed approximately 14,000 sqft impacted surface soil (denuded vegetation and visually stained area) that is located along the most downstream/gradient portion of drainage ditch.
- Removed soil is being held in on-site roll-off boxes pending sampling and disposal.
- Continued to conduct ambient air monitoring onsite that revealed no detections.
- Maintained earthen berms/dams.

Due to the stable state of the incident, on-going clean-up activities, and planned oversight by LDEQ, EPA OSC and its technical contractor demobilized from the site on 05 May 2018. EPA planned to maintain contact with LDEQ for incident updates and conduct follow-up site visits as progress is made.

On 11 May 2018, EPA conducted a follow-up site visit that was coordinated by OSC Guidry and utilizing EPA's technical contractor. During the follow-up site visit, the incident location and other impacted areas (drainage ditches and canal) were assessed and briefings with LDEQ, the RP, and the RP's clean-up contractors were conducted to determine the status of the incident response. The following information, as of 11 May 2018 at 1300 hrs., was obtained and illustrated in the *FlowChem Site Sketch – 5/11/18 update* located in the documents section.

Of the 4,870 feet (approximate) of impacted drainage (drainage ditches, drainage canal, and below ground drainage), 1,790 feet (approximate) of impacted drainage ditches were scraped; 152 feet (approximate) of impacted drainage ditches had minor visual staining and required action, likely scraping; 507 feet (approximate) of impacted drainage canal was scraped; 702 feet (approximate) of impacted below ground drainage had fluid removed; and 1,719 feet (approximate) of impacted below ground drainage contained impacted water that required recovery and flushing. Approximately 50% of the incident location was cleared of damaged storage containers (drums and totes) and residual sludge material. In addition, 1,657 square feet of impacted surface soil was scraped.

LDEQ and RP finalized plan for sampling impacted drainage ditches and canal. The drainage canal was sampled on 10 May 2018. The scraped impacted surface soil was planned to be sampled on 11 May 2018. The scraped drainage ditches were ready for sampling that was planned to commence within the

next few days.

During the incident response the following waste streams and associated volumes were generated, 12,500 barrels of impacted fire suppression water; 1,920 cubic yards of impacted soil; and 120 cubic yards of sludge material from incident location, which was being held on-site within 25 fractionation tanks, 96 roll-off boxed, and 6 vacuum boxes, respectively. The waste material has been sampled and submitted to SGS Laboratory (SGS), located in Lafayette, Louisiana, for waste profile analysis. In addition, the soil samples, per LDEQ direction, were also submitted to SGS for analysis for comparison to RECAP standards.

The RP changed the clean-up contractor from Shelton Services to E3 and SWS Services due to a State of Louisiana licensing issue and not performance related. The RP's environmental contractor (GHD) remained unchanged. The cause of the incident remains unknown and is under investigation.

On 25 May 2018, EPA conducted a follow-up site visit that was coordinated by OSC Guidry and utilizing EPA's technical contractor. During the follow-up site visit, the incident location and other impacted areas (drainage ditches and canal) were assessed and briefings with LDEQ, the RP, and the RP's clean-up contractors were conducted to determine the status of the incident response. The following information, as of 25 May 2018 at 1330 hrs., was obtained and illustrated in the *FlowChem Site Sketch – 5/25/18 update* located in the documents section.

The clean-up crew has addressed the impacted drainage (~ 1,790 feet of drainage ditches, ~507 feet of drainage canal, and ~2,421 feet of below ground drainage) and 1,900 square feet of surface soil through a combination of fluid recovery, flushing, and/or excavation/scraping, as applicable. Following clean-up activities, the addressed areas were sampled, per LDEQ's direction and approved sampling plan, as well as re-addressed and resampled, as needed due to exceedances as compared to LDEQ directed clean-up criteria. These actions generated ~525,000 gallons of recovered liquids (contaminated impacted fire suppression water/foam and fresh water used during flushing of drainage) and an estimated 3,000 cubic yards of excavated/scraped impacted surface soil.

The clean-up crew continues to maintain earthen berms within the addressed drainage ditches and canal until they received approval from LDEQ following receipt of sample results. The drainage canal samples results were expected to be received on 25 May 2018 and remaining results on 29 May 2018.

The incident area has been cleared of damaged storage containers (drums and totes); ~300 cubic yards sludge material was removed; remaining chemical within above-ground storage tanks and other storage containers were transferred into storage containers; and the concrete slab was pressure washed. Off-specification/damaged chemical and storage container rinsate is being held within an on-site fraction tank. Following clearing of incident area, the RP's environmental contractor collected soil samples from eight (8) soil boring through the cement slab to a depth of 5 feet below ground surface, which indicated the incident did not impact the soil below the concrete slab.

During the incident, the clean-up operations generated four (4) waste streams (contaminated fire suppression water/foam, impacted surface soil, sludge from incident area, and off-specification chemicals and storage container rinsate. All but the off-specification chemicals and storage container rinsate waste stream has been sampled and submitted to waste disposal facilities for acceptance. The environmental contractor plans to collect a waste characterization sample for off-specification chemicals and storage container rinsate waste by early next week. The contaminated fire suppression water/foam is being transported to Preston Environmental located in Baton Rouge, La for treatment and disposal; by end of day, crew plans to be completed off-site disposal and cleaning of fractionation tanks. The impacted surface soil is currently being evaluated for biological remediation by Veolia Waste Management; on 29 May 2018, crew expects to commence transportation off-site for disposal. The incident area sludge is being evaluated by Clean Harbors disposal facility located in White Castle, Louisiana; crew plans to commence transportation off-site for disposal once approval is received.

The RP's environmental contractor continued ambient air monitoring through mid-day on 24 May 2018 that indicated clean-up operations were not impacting ambient air quality.

LDEQ's Emergency Response Branch has transitioned the site to their Remediation Division.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*

2.2 Planning Section

2.2.1 Anticipated Activities

FlowChem plans to continue incident response activities that include removal of earthen berms and/or re-address and re-sample, as need and per LDEQ direction; transporting waste off-site for disposal; returning addressed area to natural grade; decontamination of storage tanks and equipment. Clean-up activities should be completed or near completion by 08 June 2018. In addition, the earthen berms within drainage canal are planned to be removed by early next week.

2.2.1.1 Planned Response Activities

EPA plans to continue removal oversight until FlowChem completes clean-up of incident location.

2.2.1.2 Next Steps

2.2.2 Issues

None at this time.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

No information available at this time.

4. Personnel On Site

No information available at this time.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.